

40

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 10

Complete if Known

| | |
|------------------------|-----------------|
| Application Number | 09/057,861 |
| Filing Date | April 9, 1998 |
| First Named Inventor | Sachs, Howard |
| Art Unit | 2750 284 |
| Examiner Name | V. Vu |
| Attorney Docket Number | 12172H-004530US |

U.S. PATENT DOCUMENTS

| Examiner | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|----------|-----------------------|--|--------------------------------|--|---|
| | | Number Kind Code ² (if known) | | | |
| Vr. | 1 | 6,442,701 | 09-27-2002 | Hurd | |
| | 2 | 6,438,747 | 08-20-2002 | Schreiber et al. | |
| | 3 | 6,408,428 | 06-18-2002 | Schlansker et al. | |
| | 4 | 6,385,757 | 05-07-2002 | Gupta et al. | |
| | 5 | 6,381,704 | 04-30-2002 | Cano et al. | |
| | 6 | 6,378,109 | 04-23-2002 | Young et al. | |
| | 7 | 6,374,403 | 04-16-2002 | Darte et al. | |
| | 8 | 6,374,346 | 04-16-2002 | Seshan et al. | |
| | 9 | 6,363,516 | 03-26-2002 | Cano et al. | |
| | 10 | 6,321,318 | 11-20-2001 | Baltz et al. | |
| | 11 | 6,317,820 | 11-13-2001 | Shiell et al. | |
| | 12 | 6,314,560 | 11-06-2001 | Dunn et al. | |
| | 13 | 6,314,431 | 11-06-2001 | Gornish | |
| | 14 | 6,311,234 | 10-30-2001 | Seshan et al. | |
| | 15 | 6,298,370 | 10-02-2001 | Tang et al. | |
| | 16 | 6,263,470 | 07-17-2001 | Hung et al. | |
| | 17 | 6,260,190 | 07-10-2001 | Ju | |
| | 18 | 6,253,359 | 06-26-2001 | Cano et al. | |
| | 19 | 6,247,172 | 06-12-2001 | Dunn et al. | |
| | 20 | 6,246,102 | 06-12-2001 | Sauerbrey et al. | |
| | 21 | 6,219,833 | 04-17-2001 | Solomon et al. | |
| | 22 | 6,219,796 | 04-17-2001 | Bartley | |
| | 23 | 6,195,756 | 02-27-2001 | Hurd | |
| | 24 | 6,182,203 | 01-30-2001 | Simar, Jr. et al. | |
| | 25 | 6,179,489 | 01-30-2001 | So et al. | |
| | 26 | 6,173,248 | 01-09-2001 | Brauch | |
| | 27 | 6,167,466 | 12-26-2000 | Nguyen et al. | |
| | 28 | 6,145,027 | 11-07-2000 | Seshan et al. | |
| | 29 | 6,128,725 | 10-03-2000 | Leach | |
| | 30 | 6,125,334 | 11-26-2000 | Hurd | |
| | 31 | 6,112,298 | 08-29-2000 | Deao et. al. | |
| | 32 | 6,112,291 | 08-29-2000 | Scales et al. | |
| | 33 | 6,105,123 | 08-15-2000 | Raje | |
| | 34 | 6,105,119 | 08-15-2000 | Kerr et al. | |
| | 35 | 6,081,885 | 06-15-2000 | Deao et al. | |
| | 36 | 6,078,940 | 06-20-2000 | Scales | |
| | 37 | 6,065,106 | 05-16-2000 | Deao et al. | |

Examiner
Signature

V. Vu

Date
Considered

7-10-03

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231
PA 3275819 v1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 10

Complete if Known

| | |
|------------------------|-----------------|
| Application Number | 09/057,861 |
| Filing Date | April 9, 1998 |
| First Named Inventor | Sachs, Howard |
| Art Unit | 2758-2154 |
| Examiner Name | V. Vu |
| Attorney Docket Number | 12172H-004530US |

U.S. PATENT DOCUMENTS

| Examiner | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|----------|-----------------------|--|--------------------------------|--|---|
| | | Number Kind Code ² (if known) | | | |
| ✓ | 38 | 6,061,780 | 05-09-2000 | Shippy et al. | |
| | 39 | 6,058,474 | 05-02-2000 | Baltz et al. | |
| | 40 | 6,055,649 | 04-25-2000 | Deao et al. | |
| | 41 | 6,055,628 | 04-25-2000 | Seshan et al. | |
| | 42 | 6,029,240 | 02-22-2000 | Blaner et al. | |
| | 43 | 6,026,479 | 02-15-2000 | Fisher et al. | |
| | 44 | 6,023,751 | 02-08-2000 | Schlansker et al. | |
| | 45 | 6,016,555 | 01-18-2000 | Deao et al. | |
| | 46 | 5,999,739 | 12-07-1999 | Soni et al. | |
| | 47 | 5,999,738 | 12-07-1999 | Schlansker et al. | |
| | 48 | 5,970,241 | 10-19-1999 | Deao et al. | |
| | 49 | 5,958,044 | 09-28-1999 | Brown et al. | |
| | 50 | 5,943,499 | 08-24-1999 | Gillies et al. | |
| | 51 | 5,941,983 | 08-24-1999 | Gupta et al. | |
| | 52 | 5,933,850 | 08-03-1999 | Kumar et al. | |
| | 53 | 5,930,508 | 07-27-1999 | Faraboschi et al. | |
| | 54 | 5,909,559 | 06-01-1999 | So | |
| | 55 | 5,901,318 | 05-04-1999 | Hsu | |
| | 56 | 5,881,280 | 03-09-1999 | Gupta et al. | |
| | 57 | 5,881,260 | 03-09-1999 | Raje et al. | |
| | 58 | 5,870,576 | 02-09-1999 | Faraboschi et al. | |
| | 59 | 5,864,692 | 01-26-1999 | Faraboschi et al. | |
| | 60 | 5,778,219 | 07-07-1998 | Amerson | |
| | 61 | 5,748,936 | 05-05-1998 | Karp et al. | |
| | 62 | 5,732,234 | 03-24-1998 | Vassiliadis et al. | |
| | 63 | 5,701,430 | 12-23-1997 | Jeremiah et al. | |
| | 64 | 5,692,169 | 11-25-1997 | Kathail et al. | |
| | 65 | 5,692,139 | 11-25-1997 | Slavenburg, et al. | |
| | 66 | 5,689,653 | 11-18-1997 | Karp et al. | |
| | 67 | 5,689,428 | 11-18-1997 | Sauerbrey et al. | |
| | 68 | 5,664,135 | 09-02-1997 | Schlansker et al. | |
| | 69 | 5,513,363 | 04-30-1996 | Kumar et al. | |
| | 70 | 5,506,974 | 04-09-1996 | Church et al. | |
| | 71 | 5,504,932 | 04-02-1996 | Vassiliadis et al. | |
| | 72 | 5,502,826 | 03-26-1996 | Vassiliadis et al. | |
| | 73 | 5,475,853 | 12-12-1995 | Blaner et al. | |
| | 74 | 5,471,593 | 11-28-1995 | Branigin | |

Examiner
Signature

✓ V. Vu

Date
Considered

7-10-03

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Applicant's unique citation designation number (optional). ³ Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ⁴ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁷ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231
PA 3275819 v1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 10

Complete if Known

Application Number 09/057,861
Filing Date April 9, 1998
First Named Inventor Sachs, Howard
Art Unit 2758 2154
Examiner Name V. Vu
Attorney Docket Number 12172H-004530US

U.S. PATENT DOCUMENTS

| Examiner | Cite No. ¹ | Document Number | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|----------|-----------------------|-----------------|-----------------------------------|--------------------------------|--|---|
| | | Number | Kind Code ² (if known) | | | |
| ✓✓ | 75 | 5,465,377 | | 11-7-1995 | Blaner et al. | |
| | 76 | 5,459,844 | | 10-17-1995 | Eickemeyer et al. | |
| | 77 | 5,448,746 | | 09-05-1995 | Eickemeyer et al. | |
| | 78 | 5,446,850 | | 08-29-1995 | Jeremiah et al. | |
| | 79 | 5,442,762 | | 08-15-1995 | Kato et al. | |
| | 80 | 5,404,469 | | 04-04-1995 | Chung et al. | |
| | 81 | 5,355,460 | | 10-11-1994 | Eickemeyer | |
| | 82 | 5,377,339 | | 12-27-1994 | Saito et al. | |
| | 83 | 5,386,531 | | 01-13-1995 | Blaner et al. | |
| | 84 | 5,398,321 | | 03-14-1995 | Jeremiah | |
| | 85 | 5,303,356 | | 04-12-1994 | Vassiliadis et al. | |
| | 86 | 5,295,249 | | 03-15-1994 | Blaner et al. | |
| | 87 | 5,287,467 | | 02-15-1994 | Blaner et al. | |
| | 88 | 5,276,821 | | 01-04-1994 | Imai et al. | |
| | 89 | 5,276,819 | | 01-04-1994 | Rau et al. | |
| | 90 | 5,197,135 | | 03-23-1993 | Eickemeyer et al. | |
| | 91 | 5,051,940 | | 09-24-1991 | Vassiliadis et al. | |
| | 92 | 5,051,885 | | 09-24-1991 | Yates et al. | |
| | 93 | 5,021,945 | | 06-04-1991 | Morrison et al. | |
| | 94 | 4,920,477 | | 04-24-1990 | Colwell et al. | |
| | 95 | 4,888,679 | | 12-19-1989 | Fossum et al. | |
| ✓ | 96 | 4,295,193 | | 10-13-1981 | Pomerene | |

FOREIGN PATENT DOCUMENTS

| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
|-----------------------|--------------------------|---------------------------|---------------------|-----------------------------------|--------------------------------|---|--|--------------------------|
| | | Country Code ³ | Number ⁴ | Kind Code ⁵ (if known) | | | | |
| ✓✓ | 97 | PCT | WO 88/08568 | | 11-03-1988 | | | |
| ✓✓ | 98 | PCT | WO 86/03038 | | 05-22-1986 | | | <input type="checkbox"/> |
| ✓✓ | 99 | EP | 0 451 562 | A2 | 03-20-1991 | | | |
| ✓✓ | 100 | EP | 0 496 407 | A2 | 01-23-1992 | | | |

Examiner
Signature

✓. ✓u

Date
Considered

7-10-03

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231
PA 3275819 v1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 4 of 10

Complete if Known

| | |
|------------------------|-----------------|
| Application Number | 09/057,861 |
| Filing Date | April 9, 1998 |
| First Named Inventor | Sachs, Howard |
| Art Unit | 2758-2154 |
| Examiner Name | V. Vu |
| Attorney Docket Number | 12172H-004530US |

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|------------------------|--------------------------|---|----------------|
| ✓✓. | 101 | ALLISON et al., "National Unveils Superscalar RISC Processor," Microprocessor Report, Vol. 5, No. 3, February 20, 1991. | |
| | 102 | ALVERSON et al. The Tera computer system. In Conf. Proc., 1990 Intl. Conf. on Supercomputing, pages 1-6, Amsterdam, The Netherlands. | |
| | 103 | AUSLANDER "Managing programs and libraries in AIX version 3 for RISC System/6000 processors," IBM J. Res. Develop., 34: 98 - 104 (1990). | |
| | 104 | BAKER, T., "Headroom and Legroom in the 80960 Architecture," Proc. Compcon '90, San Francisco, Feb/March 1990, pp. 299-306. | |
| | 105 | BEMIS, P. The implimentation of an industrial strength cache based locally parallel reduced instruction set computers - the apollo dn10000. Electronic Imaging '88, International Electronic Imaging Exposition and Conference, IGC, Massachusetts, USA. | |
| | 106 | BLANER et al., "A Branch Instruction Processor for SCISM Organizations," IEEE EUROMICRO 95, Conf. Proc. pp. 285-293, September 1995, Como, Italy. | |
| | 107 | CHANG et al. "Evolution of storage facilities in AIX Version 3 for RISC System/6000 processors," IBM J. Res. Develop., 34: 105 - 110 (1990). | |
| | 108 | CHoPP History original available at http://www.chopp.com (1990). | |
| | 109 | CHOU et al., "Dual-ALU CRISC Architecture and its Compiling Technique," Computers Elect. Eng., Vol. 17, No. 4., pp. 297-312 (1991). | |
| | 110 | COCKE "The evolution of RISC technology at IBM," IBM J. Res. Develop. 34: 4 - 11(1990). | |
| | 111 | COLWELL et al., "Architecture and Implementation of a VLIW Supercomputer," IEEE 1990 [16308DOC01765-1774]. | |
| | 112 | DEGLORIA et al., "A Boltzmann Machine Approach to code Optimization," Parallel Computing 17 (1991) 969- 982. | |
| | 113 | DEGLORIA et al., "A Non-Deterministic Scheduler for a Software Pipelining Compiler," IEEE 1992. | |
| | 114 | DIEP et al., "Architecture Compatible Code Boosting for Performance Enhancement of the IBM RS/6000," 1993, pp. 86-93. | |
| ↓ | 115 | DONOFRIO "Preface, The IBM RISC System/6000 processor," IBM J. Res. Develop., 34: 2 - 3 (1990). | |

Examiner
Signature

✓. ✓u

Date
Considered

7-10-03

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PA 3275819 v1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 5 of 10

Complete if Known

| | |
|------------------------|-----------------|
| Application Number | 09/057,861 |
| Filing Date | April 9, 1998 |
| First Named Inventor | Sachs, Howard |
| Art Unit | 2758 2154 |
| Examiner Name | V. Vu |
| Attorney Docket Number | 12172H-004530US |

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|------------------------|--------------------------|---|----------------|
| VV. | 116 | EBCIOGLU et al., "A Compilation Technique for Software Pipelining of Loops with Conditional Jumps," ACM 1987, pp. 69-79. | |
| | 117 | EBCIOGLU et al., "A New Compilation Technique for Parallelizing Loops with Unpredictable Branches on a VLIW Architecture," Languages and Compilers for Parallel Computing, pp. 213-229 (1990). | |
| | 118 | EBCIOGLU, Kemal, "Some Design Ideas for a VLIW Architecture for Sequential Natured Software," Proceedings of the IFIP WG 10.3 Working Conf. on Parallel Processing, Pisa Italy, April 25-27, 1988. | |
| | 119 | ELLIS, John R., "Bulldog: A Compiler for VLIW Architectures," Ph.D. Dissertation, May 1985. | |
| | 120 | ESSINK et al., "Architecture and Programming of a VLIW Style Programmable Video Signal Processor" ACM (1991) | |
| | 121 | FISHER "The VLIW Machine: A multiprocessor for Compiling Scientific Code," IEEE Computer (1984). | |
| | 122 | FISHER, J.A., "Replacing Hardware that Thinks (Especially About Parallelism) with A Very Smart Compiler," Multiflow Computers, Inc. (1986). | |
| | 123 | FOX et al., "A Survey of General and Architecture-Specific Compiler Optimization Techniques," published on internet 1992. | |
| | 124 | FUKUDA et al., "Toward Advanced Parallel Processing: Exploiting Parallelism at Task and Instruction Levels," IEEE Micro, August 1991, pp. 16- 19, 50-60. | |
| | 125 | GIBBONS, et al., "Efficient Instruction Scheduling for a Pipelined Architecture" ACM (1986). | |
| | 126 | GOLUMBIC et al. "Instruction scheduling beyond basic blocks," IBM J. Res. Develop., 34: 93 - 97 (1990). | |
| | 127 | GOODMAN et al. Code scheduling and register allocation in large basic blocks. In Conf. Proc., 1988 Intl. Conf. on Supercomputing, pages 442-452, St. Malo, France. | |
| | 128 | GRIMES et al. "The Intel i860 64-bit Processor: General Purpose CPU with 3D Graphics Capabilities," IEEC Computer Graphics and Applications pp. 85-94 (1989). | |
| | 129 | GROHOSKI "Machine organization of the IBM RISC System/6000 processor," IBM J. Res. Develop., 34: 37 - 58 (1990). | |
| V | 130 | GROHOSKI et al. "Branched and Fixed - Point Instruction Execution Units," IBM RISC System/6000 Technology 1990, pp. 24-32. | |

Examiner
Signature

V, Vu

Date
Considered

7-10-03

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PA 3275819 v1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 6 of 10

Complete if Known

| | |
|------------------------|----------------------|
| Application Number | 09/057,861 |
| Filing Date | April 9, 1998 |
| First Named Inventor | Sachs, Howard |
| Art Unit | 2758 2154 |
| Examiner Name | V. Vu |
| Attorney Docket Number | 12172H-004530US |

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|---------------------|-----------------------|---|----------------|
| ✓ V. | 131 | GROVES et al., "RISC System/6000 Processor Architecture," Microprocessors and Microsystems, Vol. 14, No. 6, July/August 1990, pp. 357-366. | |
| | 132 | GUPTA et al., "Compilation Techniques for a Reconfigurable LIW Architecture," Journal of Supercomputing, 3, 271-304 (1989). | |
| | 133 | HA et al. "Compile-Time Scheduling and Assignment of Data-Flow Program Graphs with Data-Dependent Iteration," IEEE Transaction on Computers, 40:1225-1238 (1991). | |
| | 134 | HIGBIE, L.C., "Overlapped Operation with Microprogramming," IEEE Trans. on Computers, Vol. C- 27, No. 3, March 1978, pp. 270-274. | |
| | 135 | HOKENEK et al. "Leading-zero anticipator (LZA) in the IBM RISC System/6000 floating-point execution unit," IBM J. Res. Develop., 34: 71 - 77 (1990). | |
| | 136 | HWU et. al. The superblock: An effective technique for VLIW and superblock compilation. Journal of Supercomputing, 7:229-248 (1993). | |
| | 137 | Intel i860 chipset product datasheet (2001). | |
| | 138 | Johnson "Super-scalar Processor Design," Stanford University Department of Electrical Engineering dissertation for Phd. (1989). | |
| | 139 | KATHAIL et al., "HPL-PD Architecture Specification: Version 1.0," HP Lab Reports (2000). | |
| | 140 | KEUHN et al., "The Horizon Supercomputing System: Architecture and Software," Supercomputing '88, pp. 28-34. IEEE (1988). | |
| | 141 | KOHN et al. Introducing the Intel i860 64-bit microprocessor. IEEE Micro, 9(4):15-30 (1989). | |
| | 142 | KOHN et al. "The i860 64-Bit Super Computing Microprocessor," Proceedings on Supercomputing pp.405-456 (1989). | |
| | 143 | LICHTENSTEIN, "The Architecture of the Culler 7," Compcon ' 86 pp 467-470 (1986). | |
| | 144 | LOWNEY et al., "The Multiflow Trace Scheduling Compiler," The Journal of Supercomputing, 7, 51-142 (1993). | |
| ✓ | 145 | MALIK et al., "Architectural Effects on Dual Instruction Issue with Interlock Collapsing ALUs," IEEE 1993. | |

Examiner
Signature

V. Vu

Date
Considered

7-10-03

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PA 3275819 v1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 7 of 10

Complete if Known

| | |
|------------------------|-----------------|
| Application Number | 09/057,861 |
| Filing Date | April 9, 1998 |
| First Named Inventor | Sachs, Howard |
| Art Unit | 2758 2154 |
| Examiner Name | V. Vu |
| Attorney Docket Number | 12172H-004530US |

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|---------------------|-----------------------|---|----------------|
| VV. | 146 | MALIK et al., "Execution Dependencies and Their Resolution In Fine Grain Parallel Machines," IEEE 1993. | |
| | 147 | MANKOVICH et al. "CHoPP Principles of Operation," Processor ICS pp. 2-10 (1987). | |
| | 148 | MANKOVICH et al. "Designing and Programming the CHoPP Supercomputer," Supercomputer Architectures pp 106-137 (1990). | |
| | 149 | MARGULIS "i860 Microprocessor Internal Architecture," International Specialist Seminar, April 11-15, 1988. | |
| | 150 | MARKSTEIN "Computation of elementary functions on the IBM RISC System/6000 processor," IBM J. Res. Develop., 34: 111 - 119 (1990). | |
| | 151 | MAY, D., "The T9000 Transputer," 1993 IEEE International Conference on Computer Design: VLSI in Computers & Processors (1993). | |
| | 152 | MCGEADY, Steve, "Inside Intel's i960CA Superscalar Processor," Microprocessors and Microsystems, Vol. 14, No. 6, July/August 1990, pp. 385-396. | |
| | 153 | MONTOYE et al. "Design of the IBM RISC System/6000 floating-point execution unit," IBM J. Res. Develop., 34: 59 - 70 (1990). | |
| | 154 | NAKATANI, et al., "Combining' as a Compilation Technique for VLIW Architectures" ACM (1990). | |
| | 155 | OEHLER et al. "IBM RISC System/6000 processor architecture," IBM J. Res. Develop., 34: 23 - 36 (1990). | |
| | 156 | PERRY "Intel's Secret is Out," IEEE Spectrum pp22-28 (1989). | |
| | 157 | POPESCU, V., et al., "The Metaflow Architecture," IEEE Micro (1990). | |
| | 158 | RATIU et al. "Pseudorandom built-in self-test methodology and implementation for the IBM RISC System/6000 processor," IBM J. Res. Develop., 34: 78 - 84 (1990). | |
| | 159 | RAU, B., "Dynamically Scheduled VLIW Processors," IEEE 1993. | |
| ↓ | 160 | SANO, B., "The 16-Fold Way: A Microparallel Taxonomy," 1992 IEEE International Conference on Computer Design: VLSI in Computers & Processors (1993). | |

Examiner
Signature

V. Vu

Date
Considered

7-10-03

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PA 3275819 v1

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 8 of 10

Complete if Known

| | |
|------------------------|-----------------|
| Application Number | 09/057,861 |
| Filing Date | April 9, 1998 |
| First Named Inventor | Sachs, Howard |
| Art Unit | 2758 2154 |
| Examiner Name | V. Vu |
| Attorney Docket Number | 12172H-004530US |

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|---------------------|-----------------------|---|----------------|
| ✓ | 161 | SMITH " The architecture of the Intel 860," MIPS pp. 53-56 (1989). | |
| | 162 | SMOTHERMAN "Culler 7," available online at http://www.paralogos.com/DeadSuper/Culler/index.html (1998). | |
| | 163 | SPEE et al., "Evaluation of the Continuation Bit in the Cyclic Pipeline Computer," Parallel Computing 18, pp. 1349-1361 (1992). | |
| | 164 | THISTLE et al.; "A Processor Architecture For Horizon," Supercomputing '88, pp. 35-41 IEEE (1988). | |
| | 165 | TOUZEAU, Roy F., "A Fortran Compiler For The FPS-164 Scientific Computer," Proceedings of the AGM SIGPLAN '84 Symposium on Compiler Construction, SIGPLAN Notices, Vol. 19, No. 6 (1984). | |
| | 166 | TYSON, G., et al., "Techniques for Extracting Instruction Level Parallelism on MIMD Architectures" [16309DOC00622-631] , undated . | |
| | 167 | VASSILIADIS et al., "In-Cache Pre-Processing and Decode Mechanisms for Fine Grain Parallelism in SCISM," 12th Ann. Int'l. Phoenix Conf. on Computers and Comm., Tempe, Ariz., pp. 91-97, March 1993. | |
| | 168 | VASSILIADIS et al., "On the Attributes of the SCISM Organization," Computer Architecture News, Vol. 20, No. 4, pp. 44-53, September 1992. | |
| | 169 | VASSILIADIS et al., "SCISM: A Scalable Compound Instruction Set Machine," IBM J. Res. Development, Vol. 38, No. 1, January 1994, pp. 59-78. | |
| | 170 | WANG, "Distributed Instruction Set Computer Architecture," IEEE Transactions on Computers 40:915-934 (1991). | |
| | 171 | WARREN "Instruction scheduling for the IBM RISC System/6000 processor," IBM J. Res. Develop., 34: 85 - 92 (1990). | |
| | 172 | Prior Art Claims Charts, "The Asserted 5,560,028 Claims are Invalid over the Multiflow System," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 173 | Prior Art Claims Charts, "The Asserted 5,560,028 Claims are Invalid over the Phillips System," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 174 | Prior Art Claims Charts, "The Asserted 5,560,028 Claims are Invalid over the IBM SCISM System," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| ✓ | 175 | Prior Art Claims Charts, "The Asserted 5,794,003 Claims are Invalid over the Multiflow System," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |

Examiner
Signature

V. Vu

Date
Considered

7-10-03

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.
PA 3275819 v1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 9 of 10

Complete if Known

| | |
|------------------------|-----------------|
| Application Number | 09/057,861 |
| Filing Date | April 9, 1998 |
| First Named Inventor | Sachs, Howard |
| Art Unit | 2758 2154 |
| Examiner Name | V. Vu |
| Attorney Docket Number | 12172H-004530US |

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|---------------------|-----------------------|---|----------------|
| VV. | 176 | Prior Art Claims Charts, "The Asserted 5,794,003 Claims are Invalid over the Phillips System," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 177 | Prior Art Claims Charts, "The Asserted 5,794,003 Claims are Invalid over the IBM SCISM System," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 178 | Prior Art Claims Charts, "U.S. Patent 5,560,028 compared to the Intel i860," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 179 | Prior Art Claims Charts, "U.S. Patent 5,560,028 compared to the Culler 7," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 180 | Prior Art Claims Charts, "U.S. Patent 5,794,003 compared to the Culler 7," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 181 | Prior Art Claims Charts, "U.S. Patent 5,560,028 compared to the CHoPP," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 182 | Prior Art Claims Charts, "U.S. Patent 5,794,003 compared to the CHoPP," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 183 | Prior Art Claims Charts, "U.S. Patent 5,560,028 compared to the Apollo DN10000," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 184 | Prior Art Claims Charts, "U.S. Patent 5,794,003 compared to the Apollo DN10000," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 185 | Prior Art Claims Charts, "U.S. Patent 5,560,028 compared to the Apollo Cydra 5," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 186 | Prior Art Claims Charts, "U.S. Patent 5,794,003 compared to the Apollo Cydra 5," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 187 | Prior Art Claims Charts, "U.S. Patent 5,560,028 compared to U.S. Patent 5,021,945," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 188 | Prior Art Claims Charts, "U.S. Patent 5,794,003 compared to U.S. Patent 5,021,945," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| | 189 | Prior Art Claims Charts, "U.S. Patent 5,560,028 compared to U.S. Patent 5,377,339," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |
| V | 190 | Prior Art Claims Charts, "U.S. Patent 5,794,003 compared to U.S. Patent 5,377,339," submitted in U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160 filed July 30, 2001. | |

Examiner
Signature

V. Vu

Date
Considered

7-10-03

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PA 3275819 v1

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 10 of 10

Complete if Known

| | |
|------------------------|-----------------|
| Application Number | 09/057,861 |
| Filing Date | April 9, 1998 |
| First Named Inventor | Sachs, Howard |
| Art Unit | 2758 2154 |
| Examiner Name | V. Vu |
| Attorney Docket Number | 12172H-004530US |

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|------------------------|--------------------------|---|----------------|
| Vv, | 191 | Finding of Fact and Conclusion of Law from District Court Judge Ward regarding validity of a patent and related applications from U.S. District Court, Eastern District of Texas, Marshall Division Case Number: 2-01CV160, dated October 10, 2002. | |

Examiner
Signature

V. Vu

Date
Considered

7-10-03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PA 3275819 v1